EXHIBIT G

LB-031

ITU - Telecommunication Standardization Sector

STUDY GROUP 15

<u>Temporary Document LB-031</u>

<u>Original</u>: English

<mark>**Leuven – 14-18 June 2004**</mark>

Question: 4/15

SOURCE[1]: Texas Instruments, Inc.

TITLE: VDSL2 – **Constraining the Interleaver Complexity**

Abstract

This contribution proposes restrictions on the interleaver. The interleaver is a major source of complexity in VDSL2. We propose that the interleaver delay in time be restricted rather than restricting the depth as in ADSL2. This allows the following: 1) the flexibility of using shorter codewords to correct longer bursts, 2) the capability to correct repetitive impulse noise, and 3) lower complexity implementations for profiles that do not require the full VDSL2 data rate. We propose also that the upper limit on the number of codewords in a DMT symbol (or per unit time) scale with the data rate so that more codewords are allowed at higher data rates.

<u>Introduction</u>, <u>Limits on Interleaver Complexity</u>, <u>Limits on the Number of Codewords</u>, <u>Repetitive Impulse Noise</u>, <u>Examples</u>, <u>Proposal</u>, <u>References</u>

Differences

As a courtesy to those who may have read T1E1.4/2003-493, this section lists the differences between this contribution and that one.

- generally, this contribution proposes that the number of codewords in a given amount of time and the interleaver complexity should both scale with the data rate

- the substance of the introduction has not changed

- section 2 (limits on interleaver complexity): *an example is included to illustrate practically how this proposal would work in the recommendation*

- section 3 (limits on the number of codewords): *this section has been completely revised*

- section 4 (repetitive impulse noise): this section has not changed

- section 5 (examples) *the table has been revised*

- section 6 (proposal) *the proposals have been revised*

- section 7 (references) *the references have been updated*

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